

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for optically copying a packet, in which a packet in a subscriber access network based on a-wavelength division multiplexing is broadcasted using an optical broadcast module disposed independently of an optical label exchange switch, the method comprising:

(a) dividing the packet, which is received from an optical group exchange controlled by the optical label exchange switch, into a header and a payload;

(b) applying the payload to an i-th port of the optical label exchange switch;

(c) leading the payload to the optical broadcast module by controlling the optical label exchange switch so that when the header represents a label for broadcasting, a corresponding broadcasting port of the optical label exchange switch is set as an output port for the optical label exchange switch, the broadcasting port being coupled to the optical broadcast module, the optical broadcast module being designated for broadcasting; and

(d) reframing the header and the payload and transmitting the reframed header and the payload to a backbone network using the optical broadcast module.

2. (Currently Amended) The method of claim 1, wherein step (d) comprises:

(d1) storing the payload in a buffer;

(d2) outputting the payload and the header from the buffer according to transmission priority and generating a reframing packet;

(d3) changing the reframing packet into optical signals having various wavelengths;

(d4) demultiplexing the optical signals having various wavelengths so as to select only the optical signals having admitted wavelengths;

(d5) filtering the ~~demultiplexed~~ demultiplexed optical signals so as to adjust the spectral width of the optical signals to ensure a sufficient transmission distance; and

(d6) multiplexing and amplifying the filtered optical signals so as to transmit the signals to the backbone network.

3. (Currently Amended) A method for optically copying a packet, in which a packet in a subscriber access network based on a-wavelength division multiplexing is multicasted using

an optical ~~broadcast~~ multicast module disposed independently of an optical label exchange switch, the method comprising:

- (a) dividing the packet, which is received from an optical group exchange controlled by the optical label exchange switch, into a header and a payload;
- (b) applying the payload to an i-th port of the optical label exchange switch;
- (c) leading the payload to the optical multicast module by controlling the optical label exchange switch so that when the header represents a label for multicasting, a corresponding multicasting port of the optical label exchange switch is set as an output port for the optical label exchange switch, the multicasting port being coupled to the optical multicast module, the optical multicast module being designated for multicasting; and
- (d) reframing the header and the payload and transmitting the reframed header and the payload to a backbone network using the optical multicast module.

4. (Currently Amended) The method of claim 3, wherein step (d) comprises:

- (d1) storing the payload in a buffer;
- (d2) outputting the payload and the header from the buffer according to transmission priority and generating a reframing packet;
- (d3) changing the reframing packet into optical signals having various wavelengths;
- (d4) demultiplexing the optical signals having various wavelengths so as to select only the optical signals having admitted wavelengths;
- (d5) filtering the ~~demultiplexed~~ demultiplexed optical signals so as to adjust the spectral width of the optical signals to ensure a sufficient transmission distance;
- (d6) passing ~~the~~ multicast-objected wavelength in the filtered optical signals and blocking remaining optical signals; and
- (d7) multiplexing and amplifying ~~the~~ multicast-objected signal so as to transmit the multicast-objected signal to the backbone network.